

## Solid Waste Advisory Committee (SWAC) Meeting Summary June 28, 2007

### MassDEP Updates

- **2005 Solid Waste Data Update:** John Fischer, MassDEP, reported that the 2005 Solid Waste Data Update will be released soon. A notice will be sent to the SWAC list when this report is available.

### Mercury Subcommittee Report-Back

Tina Klein, MassDEP, thanked the members of the Mercury Subcommittee for their time and diligence in attending three meetings since the April SWAC meeting. She then reviewed highlights of a handout summarizing discussions to date on regulations being developed regarding management options, disposal prohibitions, and collection infrastructure for mercury-added products. A copy of this handout is provided at the end of these notes.

The mercury management act encompasses many diverse products. MassDEP is considering disposal prohibitions that will regulate these items as follows:

- Hazardous waste would continue to be regulated as hazardous waste (310 CMR 30.00)
- Universal waste would continue to be regulated as universal waste (310 CMR 30.1000)
- Non-hazardous mercury-added products would be managed through best management practices to separate items from solid waste, minimize breakage, and facilitate mercury recycling (new section - 310 CMR 76.00)
- MassDEP is not currently considering an amendment to the listed waste ban items in the solid waste facility regulations (310 CMR 19.017)

The attached handout lists examples of these categories of products, and provides the beginning of a longer frequently asked questions document that MassDEP is developing. The last section outlines a starting list of disposal options for residential and commercial waste. Many of these collection options are already in place across Massachusetts and others are ideas for expansion. Tina mentioned several corporate-sponsored take-back programs underway:

Fluorescent lamps & CFLs	WalMart Ikea True Value/Ace Hardwares Whole Foods	twice per year 1-day events ongoing ongoing, certain stores <sup>*</sup> ongoing, certain stores
Thermostats	Thermostat Recycling Corp (TRC)	electrical supply stores contractor supply stores municipal roll-out underway <sup>**</sup>

---

<sup>\*</sup> For listed stores, it's best to call in advance and check whether a specific store is participating.

<sup>\*\*</sup> For a one-time fee, TRC will issue a mail-back collection bucket to a municipality, and supply a new empty for each full bucket sent in. Municipal bucket locations must be staffed.

Greg Cooper, MassDEP, fielded several questions from attendees on the disposal prohibition on mercury products. Several attendees noted that the enforcement focus on haulers and generators, rather than disposal facilities, places haulers in an awkward position. If several different generators served by the same hauler each discards prohibited items, this would be a first time offense for each generator, but the hauler may receive multiple enforcement actions. Greg Cooper responded that MassDEP will consider this issue in developing enforcement programs for these requirements, but emphasized that according to the Mercury Management Act haulers share responsibility for meeting these requirements along with generators and disposal facilities.

MassDEP is continuing to work on developing the best combination of collection strategies and infrastructure for various mercury-containing products and is seeking more ideas and suggestions on this, as well as on education and outreach strategies. MassDEP may hold more meetings of the Mercury Subcommittee in Fall 2007 to address these issues.

An attendee commented that the Material Separation Plans (MSPs) implemented by the five large municipal waste combustors in Massachusetts represent a mercury collection service already in place that should be added to the list of collection options for mercury products shown on the handout. (Note that this has been added to the attached handout.)

For questions or more information on the Mercury Management Act, please contact Tina Klein at [tina.klein@state.ma.us](mailto:tina.klein@state.ma.us) or Lori Segall at [lori.segall@state.ma.us](mailto:lori.segall@state.ma.us).

### **Cambridge Organics Recycling Program**

Randi Mail, City of Cambridge Public Works, and Adam Mitchell, Save That Stuff, gave a very informative presentation on the City of Cambridge's innovative organics collection/recycling program also sponsored by Cambridge Chamber of Commerce, City Sprouts, and MassDEP.

The program was launched in summer 2006 with a two-year MassDEP grant of \$35,000, which was used to engage a consultant to recruit and train customers, produce public education materials, and conduct extensive outreach. Originally, the idea was to implement food waste collections from Cambridge public schools and, in the process, phase out Styrofoam™ food service ware. However, a food waste sorting study determined that the schools did not generate enough organics to kick-start a collection route in Cambridge. Also, the alternative biodegradable food service ware turned out to be cost-prohibitive for school budgets.

The program emphasis then shifted to larger generators like restaurants and industrial food processors, with the expectation that schools will piggyback on the program at a later date. The overall marketing approach is to establish large 'anchor' customers and then add smaller customers around the anchors to form viable routes.

Cambridge developed recruitment lists of high and medium quantity organics generators, including universities, hotels, restaurants, florists, coffee shops, corporate cafeterias, supermarkets, and assisted living facilities. These entities were recruited through diverse channels, including email "blasts" to members of the Chamber of Commerce, a program website ([http://www.cambridgema.gov/TheWorks/departments/recycle/compost\\_that\\_stuff.html](http://www.cambridgema.gov/TheWorks/departments/recycle/compost_that_stuff.html)),

presentations at annual liquor license renewal meetings and business association meetings, the Taste of Cambridge event, the Chamber of Commerce newsletter, business development workshops, direct calls and visits to likely customers from a food licensee list, and colorful organics artwork on the collection truck.

One early challenge was to figure out a way to correlate volumetric or per container fees generators had been paying for loose trash collection — as in two cubic yard dumpsters or larger compactors — with weight-based per ton fees that would be charged for organics collections picked up in 64-gallon plastic carts. The program found that some generators had very low trash fees with which it was difficult to compete, while others had equal or higher trash fees, which allowed the program to offer some savings. Actual costs/benefits vary with each generator's situation. Adam Mitchell mentioned one example of a supermarket that went from having its trash compactor pulled once per week to once per two months, yielding significant savings.

Currently, the program is diverting 12 to 17 tons per day of organics. The goal is to reach 20 tons per day. A full 64-gallon plastic cart weighs 200-400 pounds. A restaurant seating 50 people typically needs twice per week service. Customers pay by the weight of full carts, plus a nominal monthly rental fee per cart. The program uses locking carts to prevent spillage when carts are placed in alleys or at curbs. Most customers prefer to use plastic liners in their carts to reduce the need to wash carts, and use of liners may be made mandatory by the hauler, as carts get too dirty without liners.

A key element to program success was identifying a champion at each restaurant or other business who would officially endorse participation in the program and ensure that all employees remove contaminants to yield high quality organic feedstocks. As the program continued growing, peer pressure and personal connections among restaurant owners and staff became a useful factor in encouraging participation in the program. The program also uses a bi-lingual (English-Spanish) training poster placed at “scraping stations” to help employees understand what materials are and are not accepted (see this poster in the Powerpoint presentation posted with these meeting notes).

As the program has grown, other advantages of keeping organics out of the waste stream emerged. For instance, removing organics from a generator's regular trash dumpster helped to reduce leaking dumpsters and associated rodent problems. This led to the program slogan “Clean Up Your Trash.” Removing putrescibles also decreased the number of times that customers needed their trash dumpsters pulled. Mitchell noted that the hauling community has benefited from these improvements and was very helpful and supportive.

Randi Mail noted that a striking benefit of the program will be reduced maintenance costs for clearing or removing sewers that have been clogged by food waste dumped in garbage disposals and drains. (The Powerpoint presentation posted with these meeting notes shows a vivid example of this problem.) Cambridge DPW is considering whether to require businesses that clog sewers to participate in the organics program. Mitchell added that establishing a program relationship with customers allows Save That Stuff to advise on further improvements, such as installing grease traps to keep grease out of sewers. Mail said that program participants who

remove compostables use their garbage disposals a lot less, which automatically reduces their water use and water bills.

The program also opens the way for other waste reduction benefits. Mitchell explained that customers are finding that once they remove traditional recyclables — cans, bottles, corrugated cardboard — plus organics from their waste stream, there's not much left. This has created an opportunity for Save That Stuff to think about offering customers Zero Waste programs.

Despite all the benefits, implementing organics recycling collection has posed unique challenges. The food service industry is a 365-day per year business, and weekends and holidays are among the busiest times. However, composting facilities have limited hours of operation on Saturdays, and are typically closed on Sundays and holidays, which causes logistical problems. Participating businesses often lack storage space to hold carts till a pick-up can be scheduled. This is a particular problem in dense neighborhoods like Harvard Square and in urban environments.

In addition, it is not possible to store food waste in collection vehicles overnight because the organics liquefy and slide out. Save That Stuff has had to retrofit packer trucks with baffles to better contain food waste during regular collections. In hot weather, they have to dump vehicles more often. They have also set restrictions on how much of certain food wastes they can accept (e.g., cannot accept soup because it is too wet.)

Collected organics are taken to Rocky Hill Farm in Saugus for composting. Mail and Mitchell said that Rocky Hill is doing a very good job producing high quality compost. They added that there is a definite need in Massachusetts for more organics composting capacity. In particular, they urged that Apple D'Or, which composts Boston's yard waste, be given a permit to add food waste to its operation. Cambridge and Save That Stuff also are interested in the potential for anaerobic digestion facilities to help fill the state's capacity needs.

Additional highlights of this program are outlined in the PowerPoint posted with these meeting notes. For more information, please contact Randi Mail at the City of Cambridge at [rmail@cambridgema.gov](mailto:rmail@cambridgema.gov) or Adam Mitchell at Save That Stuff at [adam@savethatstuff.com](mailto:adam@savethatstuff.com).

### **Disaster Debris Management Planning**

John Fischer, MassDEP presented an overview of the state's planning effort for managing disaster debris. He summarized introductory guidance for local government officials that will shortly be released as a discussion draft to invite feedback from municipal officials. In coming months, MassDEP plans to work with local governments on local debris management plans, complete an update of the state Disaster Debris Management Plan, and conduct training on debris management for local governments.

For more information, please refer to the Powerpoint presentation posted with these meeting notes or contact John Fischer at [john.fischer@state.ma.us](mailto:john.fischer@state.ma.us).

**Next Solid Waste Advisory Committee Meeting**

Thursday, October 25, 2007, 1:00 to 3:00 PM.

*Note: See next page for Mercury Product Management Options Handout*

### Management Options

Mercury-added products covered by the disposal prohibition encompass a broad spectrum. Listed below are samples of mercury-added products that are currently regulated as universal waste, hazardous waste, and solid waste.

**< ----- Currently handled as ----- >**

<b>Universal Waste*</b>	<b>Solid Waste</b>	<b>Hazardous Waste</b>
Thermostat	Flat Panel TVs	Barometers (some)
Thermometer	Flat Panel Computer monitors	Elemental Mercury
Button Battery	Portable DVD players	
Lamps	Handheld gaming devices	
Sphygmomanometer	Toys with irremovable button batteries	
Electrical Switches	Projectors (some)	
Tilt switch from chest freezer	CFL	
Thermocouple from gas oven (some)		
Bilge pump	Chest freezer	
Sump pump	Gas oven (some)	
*Any device with an ampoule of Hg		

BWP is considering the following to implement the disposal prohibition:

1. Hazardous waste would continue to be regulated by 310 CMR 30.00
2. Universal waste would continue to be regulated by 310 CMR 30.1000
3. Non-hazardous mercury-added products would be managed using best management practices, separated from solid waste, managed to minimize breakage, and mercury components recycled.

#### Multiple Objectives:

- Minimize the disruption to the management practices of material currently collected in the categories listed above;
- Use the current collection infrastructure to the extent possible and recognize the need to increase the collection infrastructure;
- Capture the new segments of the waste stream not currently covered by other regulations, i.e., mercury-added products generated by households, non-hazardous mercury-added products generated by businesses;

- For mercury-added products develop management options that are clear.

## **Frequently Asked Questions**

1. How would municipal collections for electronics change with the disposal prohibition and new regulations?

**Answer:** Municipalities would not have to change their collection process but would need to check with their recycling vendor on whether they can process and properly recycle all of the new mercury-added products that will need to be recycled.

The disposal prohibition will include any electronic device that uses a mercury-added lamp for the back-lighting of a screen – laptops, PDAs, flat panel monitors. Municipal management of electronics would continue to provide an effective management option for these items. Recycling Drop-Off Operations would continue to be governed by 310 CMR 16.05(3) *Conditionally Exempt Recycling Operations*, which exempts these Operations from site assignment requirements, “provided the operation incorporates good management practice, is carried out in a manner that prevents an unpermitted discharge of pollutants to air, water or other natural resources of the Commonwealth and results in no public nuisance.”

2. How will municipal collections of white goods change with the disposal prohibition and new regulation?

**Answer:** There are two types of household appliances that may contain mercury components: chest freezers and gas ovens. While chest freezers sold today are mercury-free, older models may contain a mercury tilt switch to control the interior light. Many, but not all, manufacturers of gas ovens have phased-out the mercury thermocouple used to shut off the gas valve in the event the pilot light is extinguished.

A Recycling drop-off operation that accepts appliances has two choices.

- a) Remove the mercury component(s) prior to sending an appliance off for scrap metal processing. This may be accomplished in the same way that refrigerant from air conditioners, refrigerators, etc. is handled. Gas ovens and chest freezers could be segregated until the mercury component is removed by a service provider. Once removed the appliance could be added to the scrap metal collection. Mercury-components could also be removed by trained municipal staff. All removed mercury components must be handled as universal waste or hazardous waste.
  - b) Ensure that the vendor used for scrap metal processing will remove and properly manage the mercury components prior to the appliance being crushed or shredded. Municipalities may consider writing a requirement into bid specifications that mercury component removal and recycling certification be provided.
3. Can municipal UW sheds be used for other mercury-added products, such as toys and PDA's?

**Answer:** As long as the universal waste is kept separate (i.e., not commingled) from the non-hazardous mercury-added products, they can both be kept in the same shed. The weight of the accumulated non-hazardous mercury-added products will not be counted toward the universal waste threshold of 5000 kg.



## Collection and Management Infrastructure

### Residential Waste (and Waste from Small Businesses)

1. Municipal collection infrastructure
  - a. Lamps
    - i. Municipal UW shed/collection
    - ii. Periodic collections
  - b. Thermostats
    - i. Thermostat Recycling Corporation (TRC) collection containers at municipal collection locations. E.g.: DPW, Building Dept
    - ii. Municipal UW shed/collection
  - c. Thermometers
    - i. Municipal UW shed/collection
  - d. Button Batteries
    - i. Senior Centers
    - ii. Municipal UW shed/collection
  - e. Misc electronics
    - i. Municipal collection
2. Commercial collection infrastructure
  - a. Lamps
    - i. Take back to retailer
    - ii. Retailer one-day collection
  - b. Thermostats
    - i. TRC – electrical supply stores and contractors
  - c. Thermometers
    - i. Community health centers (?)
  - d. Button Batteries
    - i. Audiologists' offices
    - ii. Take back to retailer, eg. Radio Shack, Jewelers
  - e. Misc electronics
    - i. Staples recently announced a program
  - f. Other
    - i. MassDEP may consider technical assistance to fund projects to pilot public/private partnerships. For example: Muni collects at UW shed and business sponsors/pays for the disposal in return for promotional incentives
3. Municipal influence on businesses to establish collection-back programs
4. Municipal influence through ordinances, by-laws and contracts
  - a. Building permitting
  - b. Demo permitting
  - c. Health Dept permitting
5. What can MassDEP do to promote each of these initiatives?
  - a. For example, MassDEP could do outreach to scrap metal recyclers: Municipalities will be asking for certification of mercury switch removal prior to crushing/shredding.
6. Suggestions for components of an education campaign?
  - a. Retailer's participation in education
  - b. Use Retailers' Association to reach entire membership

In communities serviced by a large waste-to-energy facility, these services may be provided as part of the facility's Material Separation Plan.

### Commercial Waste

1. Lamps
  - a. Outreach to property managers, distributors – NEMA
  - b. Outreach to medium to small businesses
2. Thermostats
  - a. TRC – HVAC wholesale locations
  - b. C&D permitting – require separation of Hg waste
3. Thermometers

4. Button Batteries
5. Misc electronics
6. Specialty equipment
  - a. Manufacturer collection plan
  - b. Contract directly for recycling